

WHAT IS CLAIMED IS:

1. An electronic circuit for a contactless tag, comprising:  
means for rectifying an induced electromotive force caused by bringing an antenna coil into close proximity to a reader/writer to generate a rectified voltage;  
a secondary battery; and  
means for being charged according to the rectified voltage and for discharging the secondary battery.
  
2. The electronic circuit for a contactless tag according to claim 1, wherein the means for charging and discharging comprises:  
a capacitor that stores a charge according to the rectified voltage;  
a resistor through which the capacitor supplies a discharge voltage to the secondary battery so as to charge the secondary battery, the resistor acting as a time-constant resistor; and  
a diode that prevents the charge charged in the capacitor from flowing to a portion other than the secondary battery.
  
3. The electronic circuit for a contactless tag according to claim 2, wherein the capacitor is a device serving as an electric double-layer capacitor or a capacitor whose internal resistance is much smaller than that of the secondary battery and whose electrostatic capacitance is large.
  
4. The electronic circuit for a contactless tag according to claim 2, wherein the diode is defined as a first diode and the capacitor is defined as a first capacitor, and

the means for charging and discharging further comprises:

a second diode connected in series to the first diode; and

a second capacitor connected in parallel to the first capacitor

between the first diode and the second diode, and the second capacitor has a smaller capacitance than the first capacitor.

5. A contactless tag using the electronic circuit according to claim 1.

6. The electronic circuit for a contactless tag according to claim 1, further comprising a transceiving device for data communication with the reader/writer.

7. The electronic circuit for a contactless tag according to claim 6, wherein the transceiving device includes the antenna coil.

8. The electronic circuit for a contactless tag according to claim 6, wherein the transceiving device includes a resonance circuit.

9. The electronic circuit for a contactless tag according to claim 1, wherein the secondary battery is a paper type battery.

10. The electronic circuit for a contactless tag according to claim 1, wherein the secondary battery has an internal resistor.

11. The electronic circuit for a contactless tag according to claim 1, further comprising a detection circuit that detects a drop in the rectified voltage.

12. The electronic circuit for a contactless tag according to claim 1, further comprising an electrophoretic display.

13. The electronic circuit for a contactless tag according to claim 12, wherein the electrophoretic display includes a writing voltage, a current and a display holding time.

14. An electronic circuit for a contactless tag, comprising:  
a rectification circuit that rectifies an induced electromotive force caused by bringing an antenna coil into close proximity to a reader/writer to generate a rectified voltage;  
a secondary battery; and  
a charging/discharging circuit that charges according to the rectified voltage and that discharges the secondary battery.

15. The electronic circuit for a contactless tag according to claim 14, wherein the charging/discharging circuit comprises:  
a capacitor that stores a charge according to the rectified voltage;  
a resistor through which the capacitor supplies a discharge voltage to the secondary battery so as to charge the secondary battery, the resistor acting as a time-constant resistor; and  
a diode that prevents the charge charged in the capacitor from flowing to a portion other than the secondary battery.

16. The electronic circuit for a contactless tag according to claim 15, wherein the capacitor is a device serving as an electric double-layer capacitor or a

capacitor whose internal resistance is much smaller than that of the secondary battery and whose electrostatic capacitance is large.

17. The electronic circuit for a contactless tag according to claim 2, wherein the diode is defined as a first diode and the capacitor is defined as a first capacitor, and

the charging/discharging circuit further comprises:

a second diode connected in series to the first diode; and

a second capacitor connected in parallel to the first capacitor between the first diode and the second diode, and the second capacitor has a smaller capacitance than the first capacitor.

18. The electronic circuit for a contactless tag according to claim 14, further comprising a transceiving device for data communication with the reader/writer.

19. The electronic circuit for a contactless tag according to claim 18, wherein the transceiving device includes the antenna coil.

20. A method for manufacturing an electronic circuit for a contactless tag comprising:

rectifying an induced electromotive force caused by bringing an antenna coil into close proximity to a reader/writer to generate a rectified voltage;

providing a secondary voltage; and

charging a charge/discharge circuit according to a rectified voltage and discharging the secondary battery.